We claim:

1. A method for building a directed set to allow a user of a computer system to find a context in which to answer a question, the method comprising:

identifying a plurality of concepts to form a directed set, wherein one concept is a maximal element;

establishing chains in the directed set from the maximal element to each concept;

selecting one or more chains in the directed set as a basis; and

measuring how concretely each concept is represented in each chain in the basis.

2. A method according to claim 1 further comprising creating a state vector for each concept in the directed set, wherein each state vector includes as its components measures of how concretely the concept is represented in each chain in the basis.

3. A method according to claim 2 wherein creating a state vector for each concept in the directed set includes measuring a distance between the state vectors for each pair of concepts.

4. A method according to claim 1 further comprising introducing a new concept into the directed set.

5. A method according to claim 4 wherein introducing a new concept includes:

adding a new chain from the maximal element to the new concept; and

measuring new distances from the new concept to each chain in the basis.

6. A method according to claim 1 further comprising:

discarding the chains in the basis; and

re-selecting one or more chains in the directed set as a new basis.

7. A method according to claim 1 further comprising:

receiving new information about a first concept in the directed set; and

updating the directed links for the first concept.

8. A method according to claim 7 wherein updating the directed links includes at least one of:

a) removing an existing chain from the maximal element to the first concept; and

b) establishing a new chain from the maximal element to the first concept.

9. A method according to claim 1 wherein identifying a plurality of concepts includes:

listening to a content stream; and

parsing the concepts from the content stream.

10. A method according to claim 1 wherein establishing directed links between a first concept and a second concept includes:

listening to a content stream;

identifying a relationship between the first concept and the second concept from the content stream; and

establishing a chain from the maximal element to the first concept through the second concept to model the relationship between the first and second concepts.

11. A computer-readable medium containing a program to build a directed set to allow a user of a computer system to find a context in which to answer a question, the program comprising:

identification software to identify a plurality of concepts to form a directed set, wherein one concept is a maximal element;

chain-establishment software to establish chains in the directed set from the maximal element to each concept;

chain-selection software to select one or more chains in the directed set as a basis; and

measurement software to measure how concretely each concept is represented in each chain in the basis.

12. A storage medium for storing a lexicon as a directed set for use by an application program to establish a context for a query, the storage medium comprising:

a data structure stored in the storage medium, the data structure including the lexicon and including:

a plurality of concepts stored in the storage medium, wherein one concept is a maximal element; and

at least one chain extending from the maximal element to each concept, wherein the chain includes an ordered subset of the concepts, beginning with the maximal element and ending with the concept.

13. A storage medium according to claim 12 further comprising a data structure storing a plurality of distances between pairs of concepts.

14. A storage medium according to claim 12 further comprising a data structure identifying at least one chain as a chain in a basis for the directed set.

15. An apparatus on a computer system to build a directed set to allow a user of the computer system to find a context in which to answer a question, the apparatus comprising:

a data structure according to claim 12 to store the directed set;

an identification unit to identify the plurality of concepts in the directed set, wherein the directed set includes a maximal element;

a chain unit to establish chains in the directed set from the maximal element to each concept;

a basis unit to select one or more chains in the directed set as a basis; and

a measurement unit to measure how concretely each concept is represented in each chain in the basis.

16. An apparatus on a computer system to build a directed set to allow a user of the computer system to determine what questions can be answered using a given context, the apparatus comprising:

a data structure according to claim 12 to store the directed set;

an identification unit to identify the plurality of concepts in the directed set, wherein the directed set includes a maximal element;

a chain unit to establish chains in the directed set from the maximal element to each concept;

a basis unit to select one or more chains in the directed set as a basis; and

a measurement unit to measure how concretely each concept is represented in each chain in the basis.

17. A method for a user of a computer system to find a context to aid in answering a question, the method comprising:

parsing the question into one or more parsed concepts;

measuring distances in a directed set between the one or more parsed concepts; and

using the distances between the one or more parsed concepts to establish a context for the question.

18. A method according to claim 17 in which measuring distances in a directed set includes:

establishing one or more chains in the directed set, wherein each chain is rooted at a maximal element in the directed set and extends to a concept in the directed set;

creating a distance vector for the one or more parsed concepts in the directed set, wherein each distance vector includes as its components the measure of how concretely the concept is represented in each chain; and

measuring a distance between the distance vectors for each pair of parsed concepts.

19. A method for using a lexicon to submit a refined query input by a user to a query engine, wherein the refined query the method comprising:

parsing the query into one or more parsed concepts;

measuring distances in the lexicon between the one or more parsed concepts;

using the distances between the one or more parsed concepts to establish a context for the query;

refining the query according to the context for the query; and

submitting the refined query to the query engine.

20. An apparatus on a computer system to enable a user of the computer system to find a context in which to answer a question, the apparatus comprising:

a directed set stored in the computer system, the directed set including a plurality of first concepts, a maximal element, and at least one basis chain extending from the maximal element to one of the first concepts;

an input for receiving a content stream;

a listening mechanism listening to the content stream and parsing the content stream into second concepts; and

a measurement mechanism measuring distances between pairs of the second concepts according to the plurality of first concepts and the basis chains of the directed set.

21. An apparatus according to claim 20, wherein:

the apparatus further comprises a network connection; and

the input for receiving the content stream is coupled to the network connection.

22. An apparatus according to claim 20, wherein the measurement mechanism includes:

a state vector constructor converting each second concept into a state vector in Euclidean k-space; and

measuring means for measuring the distance between state vectors corresponding to the second concepts according to the plurality of first concepts and the basis chains of the directed set.